Permit Number: VA0090981
Effective Date:
Expiration Date:

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM
AND
THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, and Parts I and II of this permit as set forth herein.

Owner:	Iluka Resources Inc.
Facility Name:	Iluka Resources Inc. - Mineral Separation Plant
County:	Sussex
Facility Location:	12468 St. John Church Road, Stony Creek, VA

The owner is authorized to discharge to the following receiving stream:

Stream:	Unnamed Tributary to Galley Swamp
River Basin:	Chowan and Dismal Swamp
River Subbasin:	Chowan River
Section:	2o
Class:	VII
Special Standards:	None

Water Permit Manager, Piedmont Regional Office

Date

A. LIMITATIONS AND MONITORING REQUIREMENTS – Outfall 001

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall number 001 – Process Wastewater Discharge from the Effluent Pond.

a. Such discharges shall be limited and monitored at Outfall 001 by the permittee as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY AVERAGE	WEEKLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	NL	NA	NA	NL	1 per Month	Measured
pH	NA	NA	6.0 SU	9.0 SU	1 per Month	Grab
Total Suspended Solids	20 mg/L[1]	NA	NA	30 mg/L[1]	1 per Month	Grab
Total Hardness	NL	NA	NA	NL	1 per Month	Grab
Total Recoverable Selenium	20 ug/L[1, 2]	NA	NA	20 ug/L[1, 2]	1 per Month	Grab
Total Recoverable Zinc	0.50 mg/L[1]	NA	NA	1.0 mg/L	1 per Month	Grab
Whole Effluent Toxicity (WET) Test: NOAEC *Ceriodaphnia dubia*[3]	NA	NA	100%	NA	1 per Quarter	24 hour composite

NL = No Limitation, monitoring required
NA = Not Applicable
[1]The limitations are expressed in two significant digits.
[2] See Part I.C.1.for Schedule of Compliance.
[3] See Part I. B.1 for WET test requirements and Schedule of Compliance for WET Limit.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. LIMITATIONS AND MONITORING REQUIREMENTS – Outfall 002

2. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall number 002 – Combined Sediment and Storm Water Ponds

a. Such discharges shall be limited and monitored at Outfall 002 by the permittee as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY AVERAGE	WEEKLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	NL	NA	NA	NL	1 per Month	Estimate
pH	NA	NA	6.0 SU	9.0 SU	1 per Month	Grab
Total Suspended Solids	30 mg/L[1]	NA	NA	60 mg/L[1]	1 per Month	Grab
Turbidity	NL	NA	NA	NL	1 per Year	Grab
Hardness as CaCO3	NL	NA	NA	NL	1 per Year	Grab
Dissolved Antimony	NL	NA	NA	NL	1 per Year	Grab
Dissolved Arsenic	NL	NA	NA	NL	1 per Year	Grab
Beryllium	NL	NA	NA	NL	1 per Year	Grab
Dissolved Cadmium	NL	NA	NA	NL	1 per Year	Grab
Dissolved Copper	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Iron	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Lead	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Manganese	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Mercury	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Nickel	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Selenium	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Silver	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Zinc	NL	NA	NA	NL	1 Per Year	Grab

NL = No Limitation, monitoring required
NA = Not Applicable
[1]The limitations are expressed in two significant digits.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.
c. See Part I Sections D, E, and F for additional monitoring requirements.

A. LIMITATIONS AND MONITORING REQUIREMENTS – Outfall 003

3. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall number 003 – Admin Storm Water Pond.

a. Such discharges shall be limited and monitored at Outfall 003 by the permittee as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY AVERAGE	WEEKLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	NL	NA	NA	NL	1 per Month	Estimate
pH	NA	NA	6.0 SU	9.0 SU	1 per Month	Grab
Total Suspended Solids	30 mg/L[1]	NA	NA	60 mg/L[1]	1 per Month	Grab
Turbidity	NL	NA	NA	NL	1 per Year	Grab
Hardness as CaCO3	NL	NA	NA	NL	1 per Year	Grab
Dissolved Antimony	NL	NA	NA	NL	1 per Year	Grab
Dissolved Arsenic	NL	NA	NA	NL	1 per Year	Grab
Beryllium	NL	NA	NA	NL	1 per Year	Grab
Dissolved Cadmium	NL	NA	NA	NL	1 per Year	Grab
Dissolved Copper	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Iron	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Lead	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Manganese	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Mercury	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Nickel	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Selenium	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Silver	NL	NA	NA	NL	1 Per Year	Grab
Dissolved Zinc	NL	NA	NA	NL	1 Per Year	Grab

NL = No Limitation, monitoring required
NA = Not Applicable
[1]The limitations are expressed in two significant digits.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.
c. See Part I Sections D, E, and F for additional monitoring requirements.

A. LIMITATIONS AND MONITORING REQUIREMENTS – Outfall 004

4. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from Outfall number 004 – Process Pond 2.

a. Such discharges shall be limited and monitored at Outfall 004 by the permittee as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY AVERAGE	WEEKLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	NL	NA	NA	NL	1 per Month	Measured
pH	NA	NA	6.0 SU	9.0 SU	1 per Month	Grab
Total Suspended Solids	20 mg/L[1]	NA	NA	30 mg/L[1]	1 per Month	Grab
Total Recoverable Zinc	0.50 mg/L	NA	NA	1.0 mg/L	1 per Month	Grab
Whole Effluent Toxicity (WET) Test: NOAEC *Ceriodaphnia dubia*[2]	NA	NA	NA	NA	1 per Quarter	24 hour composite
Whole Effluent Toxicity (WET) Test: NOAEC *Pimephales promelas*[2]	NA	NA	NL	NA	1 per Quarter	24 hour composite

NL = No Limitation, monitoring required
NA = Not Applicable
[1]The limitations are expressed in two significant digits.
[2] See Part I. B.2 for WET monitoring requirements .

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. Whole Effluent Toxicity (WET) Limit and Monitoring Requirements – **Outfall 001**

a. The Whole Effluent Toxicity limitation of NOAEC = 100% effluent in Part I.A.1. is a final limit that shall become effective within 2 years after the effective date of the permit.

b. Commencing within one (1) month of the effective date of the limit, the permittee shall conduct quarterly acute toxicity tests using 24-hour flow proportioned composite samples of final effluent from Outfall 001. If the discharge is not continuous, then the requirement to collect a 24-hour composite sample shall be interpreted as a composite collected during the duration of discharge for a typical operating day. The acute test to use is:

48-hour Static Acute Test using *Ceriodaphnia dubia*

These acute tests are to be conducted using 5 geometric dilutions of effluent with a minimum of 4 replicates, with 5 organisms in each. The NOAEC[1] (No Observed Adverse Effect Concentration), as determined by hypothesis testing, shall be reported on the DMR as a Minimum of 100%. The LC_{50} should also be determined and noted on the submitted report. Tests in which control survival is less than 90% are not acceptable.

One copy of the toxicity test results shall be submitted with the DMR. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.32.

c. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limits must control the toxicity of the effluent.

d. Reporting Schedule:

Period	Compliance Period	DMR/ Report Submission Dates
Quarter 1	07/01/10 - 09/30/10	10/10/10
Quarter 2	10/01/10- 12/31/10	01/10/11
Quarter 3	01/01/11- 03/31/11	04/10/11
Quarter 4	04/01/11- 06/30/11	07/10/11
Quarter 5	07/01/11- 09/30/11	10/10/11
Quarter 6	10/01/11- 12/31/11	01/10/12
Quarter 7	01/01/12-03/31/12	04/10/12
Quarter 8	04/01/12-06/30/12	07/10/12
Quarter 9	07/01/12-09/30/12	10/10/12
Quarter 10	10/01/12-12/31/12	01/10/13
Quarter 11	01/01/13-03/31/13	04/10/13
Quarter 12	04/01/13-06/30/13	07/10/13

[1]NOAEC = the highest percent concentration where there was no significant difference when compared to the controls. (Note: This is interpreted as the highest percent concentration where there is no significant difference when compared to the controls, and below which there is no statistically significant adverse effect.)

2. Whole Effluent Toxicity (WET) Limit and Monitoring Requirements – **Outfall 004**

a. Commencing within (1) month of the effective date of this permit, the permittee shall conduct acute toxicity tests once per quarter with samples collected from Outfall 004 if a discharge occurs during the quarter until such time that 10 data sets are collected. If the discharge is not continuous, then the requirement to collect a 24-hour composite sample shall be interpreted as a composite collected during the duration of discharge for a typical operating day.

The acute tests to use that make up a set are:

48-hour Static Acute Test using *Ceriodaphnia dubia*
48-hour Static Acute Test using *Pimephales promelas*

These acute tests are to be conducted using 5 geometric dilutions of effluent with a minimum of 4 replicates, with 5 organisms in each. The NOAEC (No Observed Adverse Effect Concentration), as determined by hypothesis testing, shall be reported on the DMR. The LC_{50} should also be determined and noted on the submitted report. Tests in which control survival is less than 90% are not acceptable. One copy of the toxicity test results shall be submitted with the DMR for the month following the quarter in which the testing was performed. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

b. The permittee shall collect composite samples of effluent from Outfall 004 for biological testing. Each composite sample shall consist of grab samples collected hourly during the period of discharge or, during the initial 24 hours of discharge, should the duration of the discharge exceed 24 hours. Effluent sampling shall begin as soon as possible following the initiation of the discharge. The permittee shall include the following information with the results of the biological tests performed with a particular sample:

(1) An estimate of the total volume discharged through Outfall 004 and the duration of the discharge.
(2) The time at which the discharge was initiated.
(3) The time at which sampling was initiated.

c. In the event that sampling of Outfall 004 is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to the Department's Piedmont Regional Office with the DMR submitted for the month following the period in which the toxicity tests were to have been conducted. The requirement for sampling of the outfall shall continue until the required number of toxicity tests has been performed.

d. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

e. The test data will be evaluated for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee, or if toxicity has been noted. Should evaluation of the data indicate that a limit is needed, a WET limit and compliance schedule will be required and the toxicity tests of 2.a. may be discontinued.

f. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limits must control the toxicity of the effluent.

g. If after evaluating the data, it is determined that no limit is needed, the permittee shall continue acute toxicity testing (both species) of the outfall annually

3. **Notification Levels:** The permittee shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter (100 ug/L);
(2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
(4) The level established by the Board.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) Five hundred micrograms per liter (500 ug/L);
(2) One milligram per liter (1 mg/L) for antimony;
(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
(4) The level established by the Board.

4. **Operation and Maintenance Manual Requirement**: The permittee shall review the existing Operations and Maintenance (O&M) Manual and notify the DEQ Regional Office in writing within 90 days of the effective date of this permit whether it is still accurate and complete. If the O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office within 90 days of the effective date of this permit or with the above required notification. The permittee will maintain an accurate approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures that will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works in accordance with the approved O&M Manual. This manual shall include, but not necessarily be limited to, the following items as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent samples;

b. Discussion of Best Management Practices, if applicable;

c. Treatment works design, treatment works operation, routine preventive maintenance of units within the treatment system, critical spare parts inventory, and record keeping;

d. A plan for the management and/or disposal of waste solids and residues.

e. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I.B.6. below that will prevent these materials from reaching state waters.

f. Procedures for measuring and recording the duration and volume of treated wastewater discharged.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

5. **Licensed Operator Requirement:** The permittee shall employ or contract at least one Class III licensed wastewater works operator for the Zircon Finishing Treatment facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

6. **Materials Handling/Storage:** Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.

7. **Groundwater Monitoring:** The permittee shall submit a revised ground water monitoring plan within 60 days of the effective date of this permit. The plan shall be revised to include monitoring for sulfate, total iron, dissolved iron, and sodium at monitoring wells MW-7, MW-8, and MW-11. The plan shall also be updated to include quarterly monitoring at MW-7, MW-8, and MW-11. Until such time as the Department has approved a revised plan, the permittee shall continue sampling and reporting in accordance with the ground water monitoring plan approved on September 22, 2000. The purpose of the monitoring plan is to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the State Water Control Board's Ground Water Standards. The approved plan is an enforceable part of the permit. Upon approval, the revised groundwater monitoring plan shall supersede the September 22, 2000 plan and become an enforceable part of the permit. Any changes to the plan must be submitted for approval to the Piedmont Regional Office.

If the monitoring results indicate that any unit has contaminated the ground water, the permittee shall submit a corrective action plan within 60 days of being notified by the Piedmont Regional Office staff. The plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property. In addition, based on the extent of contamination, a risk analysis may be required. Once approved, this plan and/or analysis shall be incorporated into the permit by reference and become an enforceable part of this permit.

8. **Compliance Reporting**.

a. Maximum quantification levels shall be as follows:

Effluent Characteristic	Quantification Level
TSS	1.0 mg/L
Antimony	640 ug/L
Total Recoverable Arsenic	680 ug/L
Total Recoverable Cadmium	1.6 ug/L
Total Recoverable Copper	7.3 ug/L
Total Recoverable Iron	1000 ug/L
Total Recoverable Lead	41 ug/L
Total Dissolved Manganese	1000 ug/L
Total Recoverable Mercury	2.8 ug/L
Total Recoverable Nickel	110 ug/L
Total Recoverable Selenium	8.0 ug/L
Total Recoverable Silver	0.64 ug/L
Total Recoverable Zinc	36 ug/L

b. **Monthly Average**: Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in a. above shall be determined as follows: All concentration data below the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL listed in a. above shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is “<QL”, then report "<QL" for the quantity. Otherwise use the concentration data and flow data for each sample day to determine the daily quantity and report the average of the calculated daily quantities.

c. **Daily Maximum**: Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in a. above shall be determined as follows: All concentration data below the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL listed in a. above shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL, then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated daily maximum is “<QL”, then report "<QL" for the quantity. Otherwise use the daily average concentrations and corresponding daily flows to determine daily average quantities and report the maximum of the daily average quantities.

d. Any single datum required shall be reported as “<QL” if it is less than the test methods QL. Otherwise the numerical value shall be reported.

e. **Significant Digits --** The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used by the permittee (i.e., 5 always rounding up or to the nearest even number), the permitttee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

9. **Limitation on Discharge**:
   a. Discharge at Outfall 001 shall not occur on more than three consecutive calendar days. After three consecutive days of discharge, there shall be no discharge at Outfall 001 for a minimum period of 24 hours before discharge can resume. A daily operating log to include daily flow at Outfall 001 shall be submitted each month with the Discharge Monitoring Report. The daily operating log shall be to such detail (i.e., hours of discharge) as to allow determination of compliance with this special condition.

   b. Discharge at Outfall 004 shall not occur on more than three consecutive calendar days. After three consecutive days of discharge, there shall be no discharge at Outfall 004 for a minimum period of 24 hours before discharge can resume. A daily operating log to include daily flow at Outfall 004 shall be submitted each month with the Discharge Monitoring Report. The daily operating log shall be to such detail (i.e., hours of discharge) as to allow determination of compliance with this special condition.

10. **Total Maximum Daily Load (TMDL) Reopener:** This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

11. **Water Quality Criteria Reopener:** Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

C. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the final limitations for Total Recoverable Selenium included in Part I.A.1 in accordance with the following schedule of compliance:

1.	Submit Progress Reports	Annually from the **effective** date of the permit
2.	Achieve Compliance with Final Effluent Limitation	Within **4 years** after the **effective** date of the permit

In accordance with the dates identified in the above schedule of compliance, the permittee shall submit to the Piedmont Regional Office, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

D. GENERAL STORM WATER SPECIAL CONDITIONS

1. **Sample Type**: For all storm water monitoring required in Part I.A or other applicable sections of this permit, a minimum of one grab sample shall be taken. Unless otherwise specified, all such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

2. **Recording of Results**: For each measurement or sample taken pursuant to the storm event monitoring requirements of this permit, the permittee shall record and report with the Discharge Monitoring Reports (DMRs) the following information:

   a. The date and duration (in hours) of the storm event(s) sampled;

   b. The rainfall measurements or estimates (in inches) of the storm event which generated the sampled discharge; and

   c. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

   In addition, the permittee shall maintain a monthly log documenting the amount of rainfall received at this facility on a daily basis. A summarization of this information shall also be submitted with the DMRs.

3. **Sampling Waiver:** When a permittee is unable to collect storm water samples required in Part I.A or other applicable sections of this permit within a specified sampling period due to adverse climatic conditions, the permittee shall collect a substitute sample from a separate qualifying event in the next period and submit these data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

4. **Representative Discharges**: When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes substantially identical effluents are discharged, the permittee may test the effluent of one of such outfalls and report that the quantitative data also apply to the substantially identical outfall(s) provided that: (1) the representative outfall determination has been approved by DEQ prior to data submittal; and, (2) the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents.

5. **Quarterly Visual Examination of Storm Water Quality**

a. The permittee must perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination(s) must be made at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December. The visual examination must be made during daylight hours (e.g., normal working hours). If no storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred. The documentation must be signed and certified in accordance with Part II K of this permit.

b. Visual examinations must be made of samples collected with the first 30 minutes (or as soon thereafter as practical but not to exceed one hour) of when the runoff or snowmelt begins discharging from the facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All samples (except snowmelt samples) must be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The 72-hour storm interval is waived when the preceding measurable storm did not yield a measurable discharge, or if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term. If no qualifying storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred that resulted in storm water runoff during that quarter. The documentation must be signed and certified in accordance with Part II K of this permit.

c. The visual examination reports must be maintained on-site with the Storm Water Pollution Prevention Plan (SWPPP). The report must include the outfall location, the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

d. If the facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (i.e., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)) shall be provided in the plan.

e. When the permittee is unable to conduct the visual examination due to adverse climatic conditions, the permittee must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse

weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

6. **Allowable Non-storm Water Discharges**

a. The following non-storm water discharges are authorized by this permit provided the non-storm water component of the discharge is in compliance with 6.b, below.

(1) Discharges from fire fighting activities;
(2) Fire hydrant flushings;
(3) Potable water including water line flushings;
(4) Uncontaminated air conditioning or compressor condensate;
(5) Irrigation drainage;
(6) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;
(7) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
(8) Routine external building wash down which does not use detergents;
(9) Uncontaminated ground water or spring water;
(10) Foundation or footing drains where flows are not contaminated with process materials such as solvents;
(11) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

b. Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan must include:

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(1) Identification of each allowable non-storm water source;
(2) The location where the non-storm water is likely to be discharged; and
(3) Descriptions of any BMPs that are being used for each source.

c. If mist blown from cooling towers is included as one of the allowable non-storm water discharges from the facility, the permittee must specifically evaluate the potential for the discharges to be contaminated by chemicals used in the cooling tower, and must select and implement BMPs to control such discharges so that the levels of cooling tower chemicals in the discharges would not cause or contribute to a violation of an applicable water quality standard.

7. **Releases of Hazardous Substances or Oil in Excess of Reportable Quantities:** The discharge of hazardous substances or oil in the storm water discharge(s) from the facility shall be prevented or minimized in accordance with the storm water pollution prevention plan for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302 or § 62.1-44.34:19 of the Code of Virginia. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

a. The permittee is required to notify the Department in accordance with the requirements of Part II G of this permit as soon as he or she has knowledge of the discharge;

b. Where a release enters a municipal separate storm sewer system (MS4), the permittee shall also notify the owner or the MS4; and

c. The storm water pollution prevention plan required by this permit must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

8. **Additional Requirements for Salt Storage:** Storage piles of salt used for deicing or other commercial or industrial purposes must be enclosed or covered to prevent exposure to precipitation (except for exposure resulting from adding or removing materials from the pile). Piles do not need to be enclosed or covered where storm water from the pile is not discharged to state waters or the discharges from the piles are authorized under another permit.

E. STORM WATER POLLUTION PREVENTION PLAN

A storm water pollution prevention plan (SWPPP) for the facility was required to be developed and implemented under the previous permit. The existing storm water pollution prevention plan shall be reviewed and modified, as appropriate, to conform to the requirements of this section.

The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Permittees must implement the provisions of the storm water pollution prevention plan as a condition of this permit.

The storm water pollution prevention plan requirements of this permit may be fulfilled by incorporating by reference other plans or documents such as an erosion and sediment control (ESC) plan, a spill prevention control and countermeasure (SPCC) plan developed for the facility under Section 311 of the Clean Water Act, or best management practices (BMP) programs otherwise required for the facility, provided that the incorporated plan meets or exceeds the plan requirements of Part 0.2 (Contents of the Plan). If an ESC plan is being incorporated by reference, it shall have been approved by the locality in which the activity is to occur or by another appropriate plan approving authority authorized under the Virginia Erosion and Sediment Control Regulation, 4 VAC 50-30. All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit.

1. Deadlines for Plan Preparation and Compliance

a. The permittee shall review and modify the plan and implement changes as expeditiously as practicable, but not later than 60 days from the effective date of the permit. Verification of compliance with the above deadline shall be provided, in writing, within 10 days of either the deadline or the actual completion date, if completed earlier.

b. Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than 3 years after the effective date of this permit. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate nonstructural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

1. **Contents of the Plan:** The contents of the SWPPP shall comply with the requirements listed below and those in Part D and 0**.** The plan shall include, at a minimum, the following items:

a. Pollution Prevention Team. The plan shall identify the staff individuals by name or title that comprises the facility's storm water pollution prevention team. The pollution prevention team is responsible for assisting the facility or plant manager in developing, implementing, maintaining, and revising the facility's SWPPP. Responsibilities of each staff individual on the team must be listed.

b. Site Description. The plan shall include the following:

(1) Activities at the Facility. A description of the nature of the industrial activity(ies) at the facility.

(2) General Location Map. A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters within one mile of the facility.

(3) Site Map. A site map identifying the following:

(a) Directions of storm water flow (e.g., use arrows to show which ways storm water will flow);

(b) Locations of all existing structural BMPs;

(c) Locations of all surface water bodies;

(a) Locations of potential pollutant sources identified under Part 0.2.c and where significant materials are exposed to precipitation;

(b) Locations where major spills or leaks identified under Part 0.2.d have occurred;

(f) Locations of the following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; and liquid storage tanks;

(g) Locations of storm water outfalls and an approximate outline of the area draining to each outfall;

(h) Location and description of non-storm water discharges;

(i) Locations of the following activities where such activities are exposed to precipitation: processing and storage areas; access roads, rail cars and tracks; the location of transfer of substance in bulk; and machinery; and

(j) Location and source of runoff from adjacent property containing significant quantities of pollutants of concern to the facility (the permittee may include an evaluation of how the quality of the storm water running onto the facility impacts the facility's storm water discharges).

(4) Receiving Waters and Wetlands. The name of the nearest receiving water(s), including intermittent streams, dry sloughs, arroyos and the areal extent and description of wetland sites that may receive discharges from the facility.

c. Summary of Potential Pollutant Sources. The plan shall identify each separate area at the facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to: material handling equipment or activities, industrial machinery, raw materials, intermediate products, byproducts, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description must include:

(1) Activities in Area. A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and

(2) Pollutants. A list of the associated pollutant(s) or pollutant parameter(s) (e.g., crankcase oil, iron, biochemical oxygen demand, pH, etc.) for each activity. The pollutant list must include all significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of three years before being covered under this permit and the present.

d. Spills and Leaks. The SWPPP must clearly identify areas where potential spills and leaks that can contribute pollutants to storm water discharges can occur and their accompanying drainage points. For areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility to be covered under this permit, the plan must include a list of significant spills and leaks of toxic or hazardous pollutants that occurred during the three-year period prior to the date of the submission of the application for this permit. The list must be updated if significant spills or leaks occur in exposed areas of the facility during the term of the permit. Significant spills and leaks include releases of oil or hazardous substances in excess of reportable quantities, and may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

e. Sampling Data. The plan must include a summary of existing discharge sampling data taken at the facility, and must also include a summary of sampling data collected during the term of this permit.

f. Storm Water Controls. The SWPPP shall include a description of storm water management controls appropriate for the facility. The description of controls shall address the following minimum components:

(2) Description of Existing and Planned BMPs. The plan shall describe the type and location of existing nonstructural and structural best management practices (BMPs) selected for each of the areas where industrial materials or activities are exposed to storm water. All the areas identified in Part 0.2.c (Summary of Potential Pollutant Sources) should have a BMP(s) identified for the area's discharges. For areas where BMPs are not currently in place, include a description of appropriate BMPs that will be used to control pollutants in storm water discharges. Selection of BMPs should take into consideration:

(a) The quantity and nature of the pollutants, and their potential to impact the water quality of receiving waters;

(b) Opportunities to combine the dual purposes of water quality protection and local flood control benefits, including physical impacts of high flows on streams (e.g., bank erosion, impairment of aquatic habitat, etc.);

(c) Opportunities to offset the impact of impervious areas of the facility on ground water recharge and base flows in local streams, taking into account the potential for ground water contamination.

(3) BMP Types to be Considered. The permittee must consider the following types of structural, nonstructural and other BMPs for implementation at the facility. The SWPPP shall describe how each BMP is, or will be, implemented. If this requirement was fulfilled with the area-specific BMPs identified under Part 0.2.f. 1), then the previous description is sufficient. However, many of the following BMPs may be more generalized or non-site-specific and therefore not previously considered. If the permittee determines that any of these BMPs are not appropriate for the facility, an explanation of why they are not appropriate shall be included in the plan. The BMP examples listed below are not intended to be an exclusive list of BMPs that may be used. The permittee is encouraged to keep

abreast of new BMPs or new applications of existing BMPs to find the most cost effective means of permit compliance for the facility. If BMPs are being used or planned at the facility that are not listed here (e.g., replacing a chemical with a less toxic alternative, adopting a new or innovative BMP, etc.), descriptions of them shall be included in this section of the SWPPP.

(a) Nonstructural BMPs.

1) Good Housekeeping. The permittee must keep all exposed areas of the facility in a clean, orderly manner where such exposed areas could contribute pollutants to storm water discharges. Common problem areas include around trash containers, storage areas and loading docks. Measures must also include a schedule for regular pickup and disposal of garbage and waste materials; routine inspections for leaks and conditions of drums, tanks and containers.

2) Minimizing Exposure. Where practicable, industrial materials and activities should be protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff. Note: Eliminating exposure at all industrial areas may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9 VAC 25-31-120 F, thereby eliminating the need to have a permit.

3) Preventive Maintenance. The permittee must have a preventive maintenance program that includes timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins), as well as inspection, testing, maintenance and repairing of facility equipment and systems to avoid breakdowns or failures that could result in discharges of pollutants to surface waters.

4) Spill Prevention and Response Procedures. The plan must describe the procedures that will be followed for cleaning up spills or leaks. The procedures and necessary spill response equipment must be made available to those employees who may cause or detect a spill or leak. Where appropriate, the plan must include an explanation of existing or planned material handling procedures, storage requirements, secondary containment, and equipment (e.g., diversion valves), that are intended to minimize spills or leaks at the facility. Measures for cleaning up hazardous material spills or leaks must be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265.

1) Routine Facility Inspections. Facility personnel who are familiar with the industrial activity, the BMPs and the storm water pollution prevention plan shall be identified to inspect all areas of the facility where industrial materials or activities are exposed to storm water. These inspections are in addition to, or as part of, the comprehensive site evaluation required under Part 0.4, and must include an evaluation of the existing storm water BMPs. The inspection frequency shall be specified in the plan based upon a consideration of the level of industrial activity at the facility, but shall be a minimum of quarterly unless more frequent intervals are specified elsewhere in the permit. Any deficiencies in the implementation of the SWPPP that are found must be corrected as soon as practicable, but not later than within 14 days of the inspection, unless permission for a later date is granted in writing by the director. The results of the inspections must be documented in the SWPPP, along with any corrective actions that were taken in response to any deficiencies or opportunities for improvement that were identified.

6) Employee Training. The SWPPP must describe the storm water employee training program for the facility. The description should include the topics to be covered, such as spill response, good housekeeping, and material management practices, and must identify periodic dates for such training (e.g., every six months during the months of July and January). Employee training must be provided for all employees who work in areas where industrial materials or activities are exposed to storm water, and for employees who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people). The training should inform employees of the components and goals of the SWPPP.

(b) Structural BMPs.

1) Sediment and Erosion Control. The plan shall identify areas at the facility that, due to topography, land disturbance (e.g., construction), or other factors, have a potential for significant soil erosion. The plan must identify structural, vegetative, and/or stabilization BMPs that will be implemented to limit erosion.

2) Management of Runoff. The plan shall describe the traditional storm water management practices (permanent structural BMPs other than those that control the generation or source(s) of pollutants) that currently exist or that are planned for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site. The plan shall provide that all measures that the permittee determines to be reasonable and appropriate, or are required by a state or local authority shall be implemented and maintained. Factors for the permittee to consider when selecting appropriate BMPs should include:

a) The industrial materials and activities that are exposed to storm water, and the associated pollutant potential of those materials and activities; and

b) The beneficial and potential detrimental effects on surface water quality, ground water quality, receiving water base flow (dry weather stream flow), and physical integrity of receiving waters.

Structural measures should be placed on upland soils, avoiding wetlands and floodplains, if possible. Structural BMPs may require a separate permit under § 404 of the CWA before installation begins.

3) Example BMPs. BMPs that could be used include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices).

4) Other Controls. Off-site vehicle tracking of raw, final, or waste materials or sediments, and the generation of dust must be minimized. Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas must be minimized. Velocity dissipation devices (or equivalent measures) must be placed at discharge locations and along the length of any outfall channel if they are necessary to provide a non-erosive flow velocity from the structure to a water course.

3. **Maintenance:** All BMPs identified in the SWPPP must be maintained in effective operating condition. If site inspections required by Part I.E.4 identify BMPs that are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to

maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. In the case of nonstructural BMPs, the effectiveness of the BMP must be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

4. **Comprehensive Site Compliance Evaluation:** The permittee shall conduct facility inspections (site compliance evaluations) at least once a year. The inspections must be done by qualified personnel who may be either facility employees or outside constituents hired by the facility. The inspectors must be familiar with the industrial activity, the BMPs and the SWPPP, and must possess the skills to assess conditions at the facility that could impact storm water quality, and to assess the effectiveness of the BMPs that have been chosen to control the quality of the storm water discharges. If more frequent inspections are conducted, the SWPPP must specify the frequency of inspections.

   b. Scope of the Compliance Evaluation. Inspections must include all areas where industrial materials or activities are exposed to storm water, as identified in Part 0.2.c, and areas where spills and leaks have occurred within the past three years. Inspectors should look for:

      (1) industrial materials, residue or trash on the ground that could contaminate or be washed away in storm water;

      (2) Leaks or spills from industrial equipment, drums, barrels, tanks or similar containers;

      (3) Off-site tracking of industrial materials or sediment where vehicles enter or exit the site;

      (4) Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and

      (5) Evidence of, or the potential for, pollutants entering the drainage system.

      Results of both visual and any analytical monitoring done during the year must be taken into consideration during the evaluation. Storm water BMPs identified in the SWPPP must be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations must be inspected if possible.

   c. Based on the results of the inspection, the SWPPP shall be modified as necessary (e.g., show additional controls on the map required by Part 0.2.f.(3); revise the description of controls required by Part 0.2.f to include additional or modified BMPs designed to correct problems identified). Revisions to the SWPPP shall be completed within two weeks following the inspection, unless permission for a later date is granted in writing by the director. If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by the director;

   d. Compliance Evaluation Report. A report summarizing the scope of the inspection, name(s) of personnel making the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP, and actions taken in accordance with Part 0.4.b shall be made and retained as part of the SWPPP for at least three years from the date of the inspection. Major observations should include: the location(s) of discharges of pollutants from the site; location(s) of BMPs that need to be maintained; location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional BMPs are needed that did not exist at the time of inspection. The report shall identify

any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with Part II K of this permit*;* and

e. Where compliance evaluation schedules overlap with routine inspections required under **Part 0.2.f.(3)(a) 5)**, the annual compliance evaluation may be used as one of the routine inspections.

5. **Signature and Plan Review**

a. Signature/Location. The plan shall be signed in accordance with Part II K of this permit, and retained on-site at the facility covered by this permit in accordance with Part II B 2 of this permit.

b. Availability. The permittee shall make the SWPPP, annual site compliance inspection report, and other information available to the department upon request.

c. Required Modifications. The director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. The notification shall identify those provisions of the permit that are not being met, as well as the required modifications. The permittee shall make the required changes to the SWPPP within 60 days of receipt of such notification, unless permission for a later date is granted in writing by the director, and shall submit a written certification to the director that the requested changes have been made.

6. **Maintaining an Updated SWPPP:** The permittee shall amend the SWPPP whenever:

a. There is a change in design, construction, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility;

f. During inspections, monitoring, or investigations by facility personnel or by local, state, or federal officials it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants from sources identified under Part 0.2.c, or is otherwise not achieving the general objectives of controlling pollutants in discharges from the facility.

7. **Special Pollution Prevention Plan Requirements**

a. Additional Requirements for Storm Water Discharges Associated With Industrial Activity That Discharge Into or Through Municipal Separate Storm Sewer Systems.

(1) In addition to the applicable requirements of this permit, facilities covered by this permit must comply with applicable requirements in municipal storm water management programs developed under NPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the permittee has been notified of such conditions.

(2) Permittees that discharge storm water associated with industrial activity through a municipal separate storm sewer system shall make plans available to the municipal operator of the system upon request.

b. Additional Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to EPCRA § 313 Reporting Requirements.

Any potential pollutant sources for which the facility has reporting requirements under EPCRA § 313 must be identified in the SWPPP in Part 0.2.c (Summary of Potential Pollutant Sources). Note: this additional requirement is only applicable if the facility is subject to reporting requirements under EPCRA § 313.

F. **SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS**:

In addition to the requirements of Part I. D. and E., the plan shall include, at a minimum, the following items:

1. **SWPPP Requirements For Active and Temporarily Inactive Metal Mining Facilities.**

a. Site Description

(1) Activities at the Facility. A description of the mining and associated activities taking place at the site that can potentially affect storm water discharges covered by this permit. The description shall include the total acreage within the mine site; an estimate of the number of acres of disturbed land; an estimate of the total amount of land proposed to be disturbed throughout the life of the mine and a general description of the location of the site relative to major transportation routes and communities.

(2) Site Map. The site map shall identify the locations of the following, as appropriate: mining/milling site boundaries; access and haul roads; an outline of the drainage areas of each storm water outfall within the facility, and an indication of the types of discharges from the drainage areas; equipment storage, fueling and maintenance areas; materials handling areas; outdoor manufacturing, storage or material disposal areas; storage areas for chemicals and explosives; areas used for storage of overburden, materials, soils or wastes; location of mine drainage (where water leaves mine) or any other process water; tailings piles/ponds, both proposed and existing; heap leach pads; points of discharge from the property for mine drainage/process water; surface waters; and boundary of tributary areas that are subject to effluent limitations guidelines.

b. Summary of Potential Pollutant Sources. For each area of the mine/mill site where storm water discharges associated with industrial activities occur, the types of pollutants likely to be present in significant amounts must be identified (e.g., heavy metals, sediment). The following factors must be considered: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced or discharged; the likelihood, if any, of contact with storm water; vegetation of site; history of significant leaks/spills of toxic or hazardous pollutants. A summary of any existing ore or waste rock/overburden characterization data and test results for potential generation of acid rock shall also be included. If the ore or waste rock/overburden characterization data are updated due to a change in the ore type being mined, the SWPPP shall be updated with the new data.

c. Storm Water Controls.

(1) Nonstructural BMPs.

(a) Routine Facility Inspections. Active mining sites must be inspected at least monthly. Temporarily inactive sites must be inspected at least quarterly unless adverse weather conditions make the site inaccessible.

(b) Employee Training. Employee training shall be conducted at least annually at active mining and temporarily inactive sites.

(2) Structural BMPs. Each of the following BMPs shall be considered in the SWPPP. The potential pollutants identified in subpart 1 b above (Summary of Potential Pollutant Sources) shall determine the priority and appropriateness of the BMPs selected. If it is determined that one or more of these BMPs are not appropriate for the facility, the plan must explain why it is not appropriate. If BMPs are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), descriptions of them must be included in the SWPPP.

(a) Sediment and Erosion Control. The measures to consider include: diversion of flow away from areas susceptible to erosion (measures such as interceptor dikes and swales, diversion dikes, curbs and berms); stabilization methods to prevent or minimize erosion (such as temporary or permanent seeding; vegetative buffer strips; protection of trees; topsoiling; soil conditioning; contouring; mulching; geotextiles (matting, netting, or blankets); riprap; gabions; and retaining walls); and structural methods for controlling sediment (such as check dams; rock outlet protection; level spreaders; gradient terraces; straw bale barriers; silt fences; gravel or stone filter berms; brush barriers; sediment traps; grass swales; pipe slope drains; earth dikes; other controls such as entrance stabilization, waterway crossings or wind breaks; or other equivalent measures).

(b) Storm Water Diversion. A description of how and where storm water will be diverted away from potential pollutant sources to prevent storm water contamination. BMP options may include the following: interceptor dikes and swales; diversion dikes, curbs and berms; pipe slope drains; subsurface drains; drainage/storm water conveyance systems (channels or gutters, open top box culverts and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts) or equivalent measures.

(c) Management of Runoff. The potential pollutant sources given in subpart 1 b above (Summary of Potential Pollutant Sources) must be considered when determining reasonable and appropriate measures for managing runoff.

(d) Capping. Where capping of a contaminant source is necessary, the source being capped and materials and procedures used to cap the contaminant source must be identified.

(e) Treatment. If treatment of a storm water discharge is necessary to protect water quality, include a description of the type and location of storm water treatment that will be used. Storm water treatments include the following: chemical or physical systems; oil/water separators; artificial wetlands; etc.

2. **SWPPP Requirements for Inactive Metal Mining Facilities.**

a. Site Description.

(1) Activities at the Facility. The SWPPP shall briefly describe the mining and associated activities that took place at the site that can potentially affect the storm water discharges covered by this permit. The following must be included: approximate dates of operation; total acreage within the mine and/or processing site; estimate of acres of disturbed earth; activities currently occurring on-site (e.g., reclamation); a general description of site location with respect to transportation routes and communities.

(2) Site Map. The site map shall identify the locations of the following, as appropriate: mining/milling site boundaries; access and haul roads; an outline of the drainage areas of each storm water outfall within the facility, and an indication of the types of discharges from

the drainage areas; equipment storage, fueling and maintenance areas; materials handling areas; outdoor manufacturing, storage or material disposal areas; storage areas for chemicals and explosives; areas used for storage of overburden, materials, soils or wastes; location of mine drainage (where water leaves mine) or any other process water; tailings piles/ponds, both proposed and existing; heap leach pads; points of discharge from the property for mine drainage/process water; surface waters; and boundary of tributary areas that are subject to effluent limitations guidelines.

b. Summary of Potential Pollutant Sources. For each area of the mine/mill site where storm water discharges associated with industrial activities occur, the types of pollutants likely to be present in significant amounts must be identified (e.g., heavy metals, sediment). The following factors must be considered: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced or discharged; the likelihood, if any, of contact with storm water; vegetation of site; history of significant leaks/spills of toxic or hazardous pollutants. A summary of any existing ore or waste rock/overburden characterization data and test results for potential generation of acid rock shall also be included. If the ore or waste rock/overburden characterization data are updated due to a change in the ore type being mined, the SWPPP shall be updated with the new data.

c. Storm Water Controls.

(1) Nonstructural BMPs. The nonstructural controls in the general SWPPP requirements are not required for inactive facilities.

(2) Structural BMPs. Each of the following BMPs shall be considered in the SWPPP. The potential pollutants identified in subpart 2 b above (Summary of Potential Pollutant Sources) shall determine the priority and appropriateness of the BMPs selected. If it is determined that one or more of these BMPs are not appropriate for the facility, the plan must explain why it is not appropriate. If BMPs are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), descriptions of them must be included in the SWPPP.

(a) Sediment and Erosion Control. The measures to consider include: diversion of flow away from areas susceptible to erosion (measures such as interceptor dikes and swales, diversion dikes, curbs and berms); stabilization methods to prevent or minimize erosion (such as temporary or permanent seeding; vegetative buffer strips; protection of trees; topsoiling; soil conditioning; contouring; mulching; geotextiles (matting; netting; or blankets); riprap; gabions; and retaining walls; and structural methods for controlling sediment (such as check dams; rock outlet protection; level spreaders; gradient terraces; straw bale barriers; silt fences; gravel or stone filter berms; brush barriers; sediment traps; grass swales; pipe slope drains; earth dikes; other controls such as entrance stabilization, waterway crossings or wind breaks; or other equivalent measures).

(b) Storm Water Diversion. A description of how and where storm water will be diverted away from potential pollutant sources to prevent storm water contamination. BMP options may include the following: interceptor dikes and swales; diversion dikes, curbs and berms; pipe slope drains; subsurface drains; drainage/storm water conveyance systems (channels or gutters, open top box culverts and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts) or equivalent measures.

(c) Management of Runoff. The potential pollutant sources given in subpart 2 b above (Summary of Potential Pollutant Sources) must be considered when determining reasonable and appropriate measures for managing runoff.

(d) Capping. Where capping of a contaminant source is necessary, the source being capped and materials and procedures used to cap the contaminant source must be identified.

(e) Treatment. If treatment of a storm water discharge is necessary to protect water quality, include a description of the type and location of storm water treatment that will be used. Storm water treatments include the following: chemical or physical systems; oil/water separators; artificial wetlands; etc.

d. Comprehensive Site Compliance Evaluation. Annual site compliance evaluations may be impractical for inactive mining sites due to remote location/inaccessibility of the site, in which case the permittee must conduct the evaluation at least once every three years. The SWPPP must be documented to explain why annual compliance evaluations are not possible. If the evaluations will be conducted more often than every three years, the frequency of evaluations must be specified.